

#8



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1644

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/554,860

DATE: 03/07/2002

TIME: 10:19:59

Input Set : A:\seqlist.txt

Output Set: N:\CRF3\03072002\I554860.raw

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MAR 20 2002
TECH CENTER 1600/2900

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4 <110> APPLICANT: Bruck, Claudine
5      Bollen, Alex
6      Jacobs, Paul
7      Massaer, Marc
9 <120> TITLE OF INVENTION: Recombinant Allergen with Reduced
10      Enzymatic Activity
12 <130> FILE REFERENCE: B45122
14 <140> CURRENT APPLICATION NUMBER: 09/554,860
15 <141> CURRENT FILING DATE: 2000-05-19
17 <150> PRIOR APPLICATION NUMBER: PCT/EP98/07521
18 <151> PRIOR FILING DATE: 1998-11-16
20 <150> PRIOR APPLICATION NUMBER: GB 9724531.0
21 <151> PRIOR FILING DATE: 1997-11-19
23 <160> NUMBER OF SEQ ID NOS: 30
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 963
29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
33 <223> OTHER INFORMATION: Mutant of DerP1
35 <400> SEQUENCE: 1
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37 tcatcgatca aaacttttga agaatacaaa aaagccttca acaaaagtta tgctaccttc 120
38 gaagatgaag aagctgcccg taaaaacttt ttggaatcag taaaatatgt tcaatcaaat 180
39 ggaggtgcca tcaaccattt gtccgatttg tcgttgatg aattcaaaaa ccgatttttg 240
40 atgagtgcag aagcttttga acacctcaaa actcaattcg atttgaatgc tgaaactaac 300
41 gcctgcagta tcaatggaaa tgctccagct gaaatcgatt tgcgacaaat gcgaactgtc 360
42 actccattc gtatgcaagg aggctgtggt tcagcttggg ctttctctgg tgttgccgca 420
43 actgaatcag cttatttggc ttaccgtaat caatcattgg atcttctgta acaagaatta 480
44 gtcgattgtg cttcccaaca cggttgtcat ggtgatacca ttccacgtgg tattgaatac 540
45 atccaacata atggtgtcgt ccaagaaagc tactatogat acgttgcacg agaacaatca 600
46 tgccgacgac caaatgcaca acgtttcggt atctcaaaact attgccaaat ttaccacca 660
47 aatgtaaaca aaattcgtga agctttggct caaaccacac ggcgtattgc cgtcattatt 720
48 ggcatacaag atttagacgc attccgtcat tatgatggcc gaacaatcat tcaacgcgat 780
49 aatggttacc aaccaaacta tcacgctgtc aacattgttg gttacagtaa cgcacaaggt 840
50 gtcgattatt ggatcgtagc aaacagttgg gataccaatt ggggtgataa tggttacggt 900
51 tattttgctg ccaacatoga tttgatgatg attgaagaat atccatatgt tgtcattctc 960
52 taa
54 <210> SEQ ID NO: 2
55 <211> LENGTH: 320
56 <212> TYPE: PRT
57 <213> ORGANISM: Artificial Sequence

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59 <220> FEATURE:

60 <223> OTHER INFORMATION: Mutant of DerP1

62 <400> SEQUENCE: 2

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63 Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
64 1 5 10 15
65 Tyr Ala Arg Pro Ser Ser Ile Lys Thr Phe Glu Glu Tyr Lys Lys Ala
66 20 25 30
67 Phe Asn Lys Ser Tyr Ala Thr Phe Glu Asp Glu Glu Ala Ala Arg Lys
68 35 40 45
69 Asn Phe Leu Glu Ser Val Lys Tyr Val Gln Ser Asn Gly Gly Ala Ile
70 50 55 60
71 Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Phe Leu
72 65 70 75 80
73 Met Ser Ala Glu Ala Phe Glu His Leu Lys Thr Gln Phe Asp Leu Asn
74 85 90 95
75 Ala Glu Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile
76 100 105 110
77 Asp Leu Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly
78 115 120 125
79 Cys Gly Ser Ala Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala
80 130 135 140
81 Tyr Leu Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu
82 145 150 155 160
83 Val Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg
84 165 170 175
85 Gly Ile Glu Tyr Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr
86 180 185 190
87 Arg Tyr Val Ala Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg
88 195 200 205
89 Phe Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys
90 210 215 220
91 Ile Arg Glu Ala Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile
92 225 230 235 240
93 Gly Ile Lys Asp Leu Asp Ala Phe Arg His Tyr Asp Gly Arg Thr Ile
94 245 250 255
95 Ile Gln Arg Asp Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile
96 260 265 270
97 Val Gly Tyr Ser Asn Ala Gln Gly Val Asp Tyr Trp Ile Val Arg Asn
98 275 280 285
99 Ser Trp Asp Thr Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala
100 290 295 300
101 Asn Ile Asp Leu Met Met Ile Glu Glu Tyr Pro Tyr Val Val Ile Leu
102 305 310 315 320

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105 <210> SEQ ID NO: 3

106 <211> LENGTH: 951

107 <212> TYPE: DNA

108 <213> ORGANISM: Artificial Sequence

110 <220> FEATURE:

111 <223> OTHER INFORMATION: Mutant of DerP1

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Input Set : A:\seqlist.txt

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113 <400> SEQUENCE: 3

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114 atgaaaattg ttttggccat cgcctcattg ttggcattga gcgctgttta tgctcgtcca 60
115 tcatcgatca aaacttttga agaatacaaa aaagccttca acaaaagtta tgctaccttc 120
116 gaagatgaag aagctgcccg taaaaacttt ttggaatcag taaaatatgt tcaatcaaat 180
117 ggaggtgccca tcaaccattt gtccgatttg tcgttggttg aattcaaaaa ccgatttttg 240
118 atgagtgcag aagcttttga acacctcaaa actcaattcg atttgaacgc ctgcagtatc 300
119 aatggaaatg ctccagctga aatcgatttg cgacaaatgc gaactgtcac tcccattcgt 360
120 atgcaaggag gctgtggttc atgttgggct ttctctggtg ttgccgcaac tgaatcagct 420
121 tatttggctt accgtaatca atcattggat cttgctgaac aagaattagt cgatttgtct 480
122 tcccaacacg gttgtcatgg tgataccatt ccacgtggta ttgaatacat ccaacataat 540
123 ggtgtcgtcc aagaaagcta ctatcgatac gttgcacgag aacaatcatg ccgacgacca 600
124 aatgcacaac gtttcggtat ctcaaactat tgccaaattt acccaccaaa tgtaaacaaa 660
125 attcgtgaag ctttggctca aaccacacagc gctattgccg tcattatttg catcaaagat 720
126 ttagacgcat tccgtcatta tgatggccga acaatcattc aacgcgataa tggttaccaa 780
127 ccaaactatc acgctgtcaa cattgttggg tacagtaacg cacaagggtg cgattatttg 840
128 atcgtacgaa acagttggga taccaattgg ggtgataatg gttacggtta ttttgcgtgc 900
129 aacatcgatt tgatgatgat tgaagaatat ccatatgttg tcattctcta a 951

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131 <210> SEQ ID NO: 4

132 <211> LENGTH: 316

133 <212> TYPE: PRT

134 <213> ORGANISM: Artificial Sequence

136 <220> FEATURE:

137 <223> OTHER INFORMATION: Mutant of DerP1

139 <400> SEQUENCE: 4

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140 Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
141 1 5 10 15
142 Tyr Ala Arg Pro Ser Ser Ile Lys Thr Phe Glu Glu Tyr Lys Lys Ala
143 20 25 30
144 Phe Asn Lys Ser Tyr Ala Thr Phe Glu Asp Glu Glu Ala Ala Arg Lys
145 35 40 45
146 Asn Phe Leu Glu Ser Val Lys Tyr Val Gln Ser Asn Gly Gly Ala Ile
147 50 55 60
148 Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Phe Leu
149 65 70 75 80
150 Met Ser Ala Glu Ala Phe Glu His Leu Lys Thr Gln Phe Asp Leu Asn
151 85 90 95
152 Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile Asp Leu Arg Gln
153 100 105 110
154 Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly Cys Gly Ser Cys
155 115 120 125
156 Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala Tyr Leu Ala Tyr
157 130 135 140
158 Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu Val Asp Cys Ala
159 145 150 155 160
160 Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg Gly Ile Glu Tyr
161 165 170 175
162 Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr Arg Tyr Val Ala
163 180 185 190
164 Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg Phe Gly Ile Ser

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165          195          200          205
166 Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys Ile Arg Glu Ala
167          210          215          220
168 Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile Gly Ile Lys Asp
169 225          230          235          240
170 Leu Asp Ala Phe Arg His Tyr Asp Gly Arg Thr Ile Ile Gln Arg Asp
171          245          250          255
172 Asn Gly Tyr Gln Pro Asn Tyr His Ala Val Asn Ile Val Gly Tyr Ser
173          260          265          270
174 Asn Ala Gln Gly Val Asp Tyr Trp Ile Val Arg Asn Ser Trp Asp Thr
175          275          280          285
176 Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala Asn Ile Asp Leu
177          290          295          300
178 Met Met Ile Glu Glu Tyr Pro Tyr Val Val Ile Leu
179 305          310          315
182 <210> SEQ ID NO: 5
183 <211> LENGTH: 963
184 <212> TYPE: DNA
185 <213> ORGANISM: Artificial Sequence
187 <220> FEATURE:
188 <223> OTHER INFORMATION: Mutant of DerP1
190 <400> SEQUENCE: 5
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192 tcatcgatca aaacttttga agaatacaaa aaagccttca acaaaagtta tgctaccttc 120
193 gaagatgaag aagctgcccc taaaaacttt ttggaatcag taaaatatgt tcaatcaaat 180
194 ggaggtgcca tcaaccattt gtccgatttg tcgttggttg aattcaaaaa ccgatttttg 240
195 atgagtgcag aagcttttga acacctcaaa actcaattcg atttgaatgc tgaaactaac 300
196 gcttgcagta tcaatggaaa tgctccagct gaaatcgatt tgcgacaaat gcgaactgtc 360
197 actcccatte gtatgcaagg aggctgtggt tcatgttggg ctttctcttg tgttgccgca 420
198 actgaatcag cttatttggc ttaccgtaat caatcattgg atcttgcgtg acaagaatta 480
199 gtcgattgtg cttcccaaca cggttgtcat ggtgatacca ttccacgtgg tattgaatac 540
200 atccaacata atggtgtcgt ccaagaaagc tactatcgat acgttgacag agaacaatca 600
201 tgccgacgac caaatgcaca acgtttcggg atctcaaaact attgccaaat ttaccaccca 660
202 aatgtaaaca aaattcgtga agctttggct caaacccaca gcgctattgc cgtcattatt 720
203 ggcattcaaag atttagacgc attccgtcat tatgatggcc gaacaatcat tcaacgcgat 780
204 aatggttacc aaccaaacta tgctgctgtc aacattgttg gttacagtaa cgcacaagg 840
205 gtcgattatt ggatcgtaac aaacagttgg gataccaatt ggggtgataa tggttacgg 900
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207 taa
209 <210> SEQ ID NO: 6
210 <211> LENGTH: 320
211 <212> TYPE: PRT
212 <213> ORGANISM: Artificial Sequence
214 <220> FEATURE:
215 <223> OTHER INFORMATION: Mutant of DerP1
217 <400> SEQUENCE: 6
218 Met Lys Ile Val Leu Ala Ile Ala Ser Leu Leu Ala Leu Ser Ala Val
219 1          5          10          15
220 Tyr Ala Arg Pro Ser Ser Ile Lys Thr Phe Glu Glu Tyr Lys Lys Ala

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221          20          25          30
222 Phe Asn Lys Ser Tyr Ala Thr Phe Glu Asp Glu Glu Ala Ala Arg Lys
223          35          40          45
224 Asn Phe Leu Glu Ser Val Lys Tyr Val Gln Ser Asn Gly Gly Ala Ile
225          50          55          60
226 Asn His Leu Ser Asp Leu Ser Leu Asp Glu Phe Lys Asn Arg Phe Leu
227 65          70          75          80
228 Met Ser Ala Glu Ala Phe Glu His Leu Lys Thr Gln Phe Asp Leu Asn
229          85          90          95
230 Ala Glu Thr Asn Ala Cys Ser Ile Asn Gly Asn Ala Pro Ala Glu Ile
231          100          105          110
232 Asp Leu Arg Gln Met Arg Thr Val Thr Pro Ile Arg Met Gln Gly Gly
233          115          120          125
234 Cys Gly Ser Cys Trp Ala Phe Ser Gly Val Ala Ala Thr Glu Ser Ala
235          130          135          140
236 Tyr Leu Ala Tyr Arg Asn Gln Ser Leu Asp Leu Ala Glu Gln Glu Leu
237 145          150          155          160
238 Val Asp Cys Ala Ser Gln His Gly Cys His Gly Asp Thr Ile Pro Arg
239          165          170          175
240 Gly Ile Glu Tyr Ile Gln His Asn Gly Val Val Gln Glu Ser Tyr Tyr
241          180          185          190
242 Arg Tyr Val Ala Arg Glu Gln Ser Cys Arg Arg Pro Asn Ala Gln Arg
243          195          200          205
244 Phe Gly Ile Ser Asn Tyr Cys Gln Ile Tyr Pro Pro Asn Val Asn Lys
245          210          215          220
246 Ile Arg Glu Ala Leu Ala Gln Thr His Ser Ala Ile Ala Val Ile Ile
247 225          230          235          240
248 Gly Ile Lys Asp Leu Asp Ala Phe Arg His Tyr Asp Gly Arg Thr Ile
249          245          250          255
250 Ile Gln Arg Asp Asn Gly Tyr Gln Pro Asn Tyr Ala Ala Val Asn Ile
251          260          265          270
252 Val Gly Tyr Ser Asn Ala Gln Gly Val Asp Tyr Trp Ile Val Arg Asn
253          275          280          285
254 Ser Trp Asp Thr Asn Trp Gly Asp Asn Gly Tyr Gly Tyr Phe Ala Ala
255          290          295          300
256 Asn Ile Asp Leu Met Met Ile Glu Glu Tyr Pro Tyr Val Val Ile Leu
257 305          310          315          320
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261 <211> LENGTH: 339
262 <212> TYPE: PRT
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: Mutant of DerP1
268 <400> SEQUENCE: 7
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270 1          5          10          15
271 Ser Lys Met Val Ser Ala Ile Val Leu Tyr Val Leu Leu Ala Ala Ala
272          20          25          30
273 Ala His Ser Ala Phe Ala Ala Asp Pro Arg Pro Ser Ser Ile Lys Thr

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VERIFICATION SUMMARY

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